

5. "On Cheilostomatous Bryozoa from the Middle Lias." By Edwin A. Walford, Esq., F.G.S.

The Author describes some forms of Bryozoa from the *spinatus*-zone of the Middle Lias near Banbury, some of which had previously been classed with the Cyclostomata. The new material not only shows the opercular aperture but the opercula *in situ*, together with appendages and supra-oral ovicells characteristic of the Cheilostomata. In addition he has also found giant cells (cistern-cells) of form quite dissimilar from the ordinary zoecia and probably reproductive. He cites M. Jules Haime as having described in his magnificent monograph somewhat similar cells from the Inferior Oolite; and in the Oxfordshire Great Oolite Bryozoa Mr. Walford has found cistern-cells like the Lias species on some colonies like *Diastopora*. He contends that it is merely the acquisition of very well-preserved material which is needed to show the necessity of removal of many such species to the Cheilostomata. The name *Cisternophora* is suggested for the genus, of which several forms are described.

#### MISCELLANEOUS.

##### *On Hybrids or Mongrels with two Male Parents.*

MR. HERBERT SPENCER, in the 'Contemporary Review' for March, enters at some length into the evidence concerning the possible influence of one male parent on the offspring of another male by the same female. This question was discussed by Darwin, and the best-authenticated instances are well known; but, granting the validity of the evidence, the explanation given—that the sexual elements of the first male parent modified the somatic cells of the female—is surely not sufficiently proven to admit of the phenomenon being adduced as fatal to Weismann's hypothesis.

Sir John Lubbock (Journ. Linn. Soc., Zool. xx. p. 133) has published an instance among ants, in which it appears that the spermatozoa retained their life and energy in the body of a female for no less than thirteen years. Therefore it is possible to imagine that the male elements of the first parent really fertilized the ovum, giving rise to the supposed offspring of the second parent, although, for various reasons which need not be entered upon, this seems highly improbable.

But it does not seem so improbable that they may have *partly* fertilized it. Strasburger has shown that among plants the pollen of a species very diverse from that which he attempted to fertilize with it would frequently produce a certain amount of growth in the ovum, resulting in an aborted embryo, which would never have been noticed had not special attention been paid to the subject. Now it

seems conceivable that a spermatozoon of an earlier male, which was for any reason unable to produce a perfect embryo, might enter an ovum without destroying it or causing it to develop, and that the ovum might afterwards be fertilized by a perfect spermatozoon of another male, and develop accordingly. The germ-plasm derived from the first and apparently ineffectual spermatozoon would account for the result as recorded, and the hybrid or mongrel animal would, in fact, have two fathers.

This is hypothetical, of course; but, while waiting for further proof, it may be permissible to set hypothesis against hypothesis.

T. D. A. COCKERELL.

Las Cruces, New Mexico, U.S.A.,  
Aug. 3, 1893.

*On the Identity of the "Cotton Spinner" (Holothuria nigra) of English Authors with Holothuria Forskalii, Chiaje, and on the Occurrence of Cucumaria Koellikeri, Semp., in the Atlantic Ocean.*  
By Dr. EMIL VON MARENZELLER.

The following observations were evoked by the examination of certain Holothurians which were collected off Sines, on the coast of Portugal, and for which I am indebted to the kindness of Prof. Paulino d'Oliveira, of the University of Coimbra. The collection comprised specimens of *Holothuria Forskalii*, Chiaje, *Cucumaria Koellikeri*, Semp., and *Cucumaria Montagu*, Flem.

*Holothuria Forskalii* (to which species Ludwig justly assigned *H. cataniensis*, Gr.) was first shown to exist in the Atlantic Ocean in the year 1882 by Greeff. The author referred to found the species in Setubal Bay, while in 1890 Hérouard reported it as occurring at Roscoff. This Holothurian, which is characterized by its external appearance, by the slight development of the calcareous bodies, and the possession of Cuvierian organs, had, however, already been observed long before on the British coast, especially in the West of Ireland, and had been designated "the Nigger or Cotton Spinner" (*Holothuria nigra*). Anyone may convince himself of the justice of this view by comparing the calcareous bodies of *H. Forskalii* with the figures of these structures in *H. nigra* given by Jeffrey Bell ('Catalogue of the British Echinoderms,' London, 1892). For my part I was also able to compare preparations of calcareous bodies furnished to me by the Rev. Canon A. M. Norman, and derived from a specimen of *H. nigra* from Polperro, Cornwall. That this state of affairs, which is interesting from the point of view of animal distribution, remained so long undiscovered, is probably to be ascribed to the insufficiency of the earlier descriptions of *H. nigra*, as well as to the fact that the animals themselves did not come into the hands of those investigators who were acquainted with *H. Forskalii*. Moreover, *Stichopus Selenka*, described by Th. Barrois in 1882 from Concarneau, is certainly nothing else than *H. Forskalii*. The difference shown in the representation of the calcareous bodies will receive correction. It appears that in